

The Concept of Heed

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When I arrived in Adelaide in 1951, I found myself in the Department of Philosophy as the sole representative of the science of Psychology on the teaching staff of the university. Since in those days every trainee secondary school teacher was obliged to take my course in the subject as part of the Diploma in Education which read alongside the particular degree course being followed, I had a very large number of students who were taught, if one can call it that, in three groups. One group attended two lectures a week in the morning. A second group attended two lectures a week in the evenings. A third group were already in teaching posts elsewhere in South Australia and the Northern Territory and followed the course as best they could by means of a correspondence text distributed, believe it or not by the Adelaide School of Mines. Having, needless to say, no laboratory facilities, and with only philosophers to talk to, I spent most of the research time left over after preparing my lectures and planning and fighting for the future development of psychology as an independent scientific discipline within the university to reading from cover to cover and thinking about the contents of Gilbert Ryle's (1949) book *The Concept of Mind*. This resulted in my first publication, an article entitled 'The concept of heed' the manuscript of which was received by the editor of the *British Journal of Psychology* on the 23rd February 1954 and published in the journal later the same year. The paper [...] begins by endorsing Ryle's claim that most of our mental concepts are dispositional and his hypothetical analysis of sentences ascribing such concepts to the person. In other words I agree with Ryle in thinking that, when we say of someone that they believe a certain proposition to be true, we are not saying anything about what he or she is currently doing. We are describing how he or she would think talk or behave if at any time the issue of the truth or falsity of the proposition in question were to arise. Having accepted this part of Ryle's thesis I go on to refute his attempt to extend this analysis from mental state to mental process and mental activity concepts by means of his so-called "theory of mongrel categoricals" in which to say that someone is paying attention to what he or she is doing is a matter of his

or her doing it in such a way as to get it right rather than a matter of controlling the activity by means of an internal activity whereby the organism focuses on some aspects of the total current sensory input at the expense of the remainder. The paper concludes with the claim, defended in Place (1956)

"that the logical objections to the statement 'consciousness is a process in the brain' are no greater than the logical objections which might be raised to the statement 'lightning is a motion of electric charges'.

As presented here, the 1954 paper is preceded by a discussion of what with hindsight appears as its principle defect, the failure to draw attention to the distinction between passive involuntary noticing and active voluntary attention paying.

1 Paul Snowdon's distinction between Attention-N and Attention-A

The whole of this article is reproduced here (Sections 2 to 12) with only minor corrections (marked in bold type). This reflects the fact that, considered as a refutation of Ryle's mongrel categorical theory of heed concepts, I have nothing to add to or subtract from what I wrote forty five years ago. However, with hindsight, it appears, that, considered as a conceptual analysis of the concept of attention, it suffers from a major defect, the failure to acknowledge the important distinction drawn by the philosopher Paul Snowdon of Exeter College, Oxford, in an unpublished paper presented at a one day conference on 'Attention and Consciousness' held in the Department of Philosophy, University College, London on 26th May 1995. In this paper Snowdon distinguishes two forms of attention which he calls "Attention-N" ("N" for 'noticing') and "Attention-A" ("A" for 'active'). Of these Attention-N is an instantaneous mental event which is passive and involuntary. It comes "out of the blue" and results in a sudden focusing of attention on a particular feature of the individual's current sensory input or current thought process to the presence of which he or she had been previously oblivious. Attention-A by contrast is an active voluntary on-going process whereby the individual maintains and directs the focus of attention from one

part of the sensorium to another or from one topic of thought to another. Needless to say, it is around Attention-A that the argument in the subsequent sections of this article revolves.

Apart from the fact that between them they both control the locus of the focus of attention at any one moment of time, these two forms of attention are connected in that one of the important functions of Attention-A is to facilitate the noticing (Attention-N) of features in the individual's stimulus environment for which he or she is searching (Attention-A). The effect of Attention-A in this case is simply to restrict the focus of attention to a part of the sensorium where the object of search is likely to be found. Noticing it remains a wholly involuntary event.

Nevertheless, the fact that involuntary noticing (Attention-N) is evidently facilitated by deliberate searching (Attention-A) encourages the belief that in those cases where Attention-N is constantly being caught by what I call in [Place (2000)] "problematic input", i.e. inputs which are either unexpected or motivationally significant relative to the individual's current and perennial motivational concerns in the absence of any conscious Attention-A activity, there is an unconscious mechanism in the brain that is constantly scanning the sensorium in search of these problematic inputs. On the neuroscientific side there is a long history of electrophysiological evidence for the occurrence of just such a scanning mechanism [...].

2 Introduction

Do the words and expressions which the subject uses when he makes his introspective report, refer to internal events going on inside him? If they do, it is difficult to see why we should not use the subject's statements in order to formulate and verify hypotheses about such processes. If they do not, it is difficult to see what reason we should have for believing in the existence of the sort of events which are described in the text-books of introspective psychology. If, as is suggested in this paper, some of them do and some do not, it becomes extremely important for the psychologist to be able to discriminate between the two cases.

Now in so far as the language of the introspective report is the 'psychological' language of ordinary speech, this is the question which, at the time when these words were

*originally put together, had recently been exercising the minds of the philosophers; and in at least one case (Ryle, 1949) the conclusion that was reached is preponderantly negative. In his book *The Concept of Mind* Ryle has attempted to show that the traditional view which holds that mental states and processes are private internal occurrences within the individual is mistaken. He does not deny that some of the statements which we ordinarily make about people, refer to states and activities of the individual that are 'private' or 'covert' in the sense that only the individual himself can report their occurrence. He would maintain, however, that such statements constitute only a small minority of the statements we make about our own and other people's minds.*

I shall argue that the number of mental concepts which do entail a reference to covert states and activities of the individual is much larger than Ryle is prepared to admit. In particular it will be contended that a reference of this kind is involved in our ordinary use of such expressions as 'being conscious of' or 'paying attention to something', 'observing', 'watching', 'looking', 'listening', 'seeing', 'hearing', 'smelling', 'tasting', 'feeling', 'noticing', 'perceiving' and 'recognizing'.

3 The concept of heed

The key notion in Ryle's account of what is traditionally referred to as our "apprehension of the external world" is the concept of "heed". As he himself points out (p. 136), this notion of "heed", or "heeding" is closely related to the concept of "consciousness" which is the basic concept in all the traditional theories of mind. While heed does not carry quite the same theoretical load as does the notion of consciousness in the traditional theories, it is employed by Ryle in his analysis of a wide range of mental concepts, and a large part of his case against the view that mental concepts entail a reference to covert states, processes and activities, would seem to depend on his ability to show that paying heed is not a covert activity.

Ryle defines the notion of "heeding" or "minding" as embracing such concepts as "noticing, taking care, attending, applying one's mind, concentrating, putting one's heart into something, thinking what one is doing, alertness, intentness, studying and trying". Concepts which "entail, but are not entailed by, heeding" include "enjoying, disliking, pondering, searching, testing, debating, planning, listening, relishing, calculating and scrutinizing" (p. 136), looking (p. 232), observing, watching, describing (p. 207) and recognizing (p. 223). Remembering something, according to Ryle (pp. 91 and 137-9) involves having paid heed to it at the time, while being conscious of sensations in one's body or objects in one's environment is evidently synonymous with heeding or noticing

them (pp. 157–8). It will be seen from this that Ryle's concept of heed corresponds more closely to the traditional concept of attention than to that of consciousness. On the traditional theories consciousness is the basic notion of which attention is a special active or conative form. For Ryle on the other hand, it is "attending" or "heeding" which is the basic concept, and no distinction is drawn between paying attention to something and being conscious of it.

4 The contemplative theory of heed

The traditional or, as Ryle calls it, the "contemplative" theory of heed or attention and consciousness in the form in which I wish to defend it, may be stated as follows. The expression 'paying attention' refers to an internal activity of the individual presumably of a non-muscular variety whereby he exercises a measure of control over the vividness or acuteness of his consciousness of (a) the sensations to which he is susceptible at that moment, or (b) such features of the environment as are impinging on his receptors, without necessarily adjusting his receptor organs or their position in any way. In paying attention to something the individual is regulating the vividness of his consciousness of the object or sensation in question and hence the number of its features of which he is conscious. The expression 'being conscious of something' refers to a peculiar internal state of the individual which normally accompanies any reasonably intense stimulation of his receptor organs, the particular form assumed by the individual's state of consciousness at a given moment being determined by the pattern of physical energies impinging on his receptor organs at the time.

Being conscious of something is by definition a necessary condition of the individual's being able to give a first hand report on that something either at the time or later. It is not, however, a sufficient condition of the individual's ability to make such a first hand report, since it is possible for someone to be conscious of things which he cannot put into words, without his actual capacity to verbalize being in any way disturbed. Likewise, though here the relationship is probably contingent rather than necessary, the successful performance of any skilled activity depends to a greater or lesser extent on the individual paying attention to, i.e. maintaining a vivid consciousness of, relevant features of the situation and his own activity with respect to it; but the mere fact that someone is paying attention to what he is doing does not entail that the performance will be adapted to the demands of the task.

5 Ryle's objections to the contemplative theory

Ryle's first objection to this type of theory (pp. 136-7) is that it leads to a *reductio ad absurdum* in those cases where we speak of watching carefully or attentively. He points out that it is always possible to ask of a spectator, whether he has been a careful or a careless one. In order to interpret this on the contemplative view, he suggests, we should have to postulate an additional process of watching his watching, which is present in the careful spectator and absent in the careless one. This interpretation leads to an infinite regress, since it would always be sensible to ask whether or not this watching of one's watching was done carefully or not. There is, however, no reason why the contemplative view should force us to adopt this particular interpretation. As Ryle himself points out (p. 136), minding can vary in degree. There is, therefore, no reason why we should not say that the difference between the careful and the careless spectator lies in the **amount** of heed that each pays to the scene before his eyes. The careless spectator is not one who fails to watch his watching, nor is he completely oblivious of what is going on, he merely pays insufficient heed to it. What distinguishes the careful spectator from the careless one are the detailed and accurate reports which he is able to furnish as a result of the richness and vividness of the impressions with which his more active heed-paying provides him.

Ryle's second objection to the traditional theory of attention is that it fails to account satisfactorily for those cases where we speak of applying our minds to some task, such as whistling or driving a car. In this case, he argues (p. 138), we are not doing two things, whistling and minding, driving the car and attending to our driving; we are performing a single activity in a certain way. He points out in support of this contention that we cannot stop driving the car and continue our heed-paying. This argument, however, is singularly unconvincing. The fact that we cannot stop driving and continue our heed-paying merely shows that we cannot continue to pay heed to something that is no longer there to pay heed to. We do not normally lapse into unconsciousness after applying the hand-brake; we turn our attention to other things. On the other hand the fact that one can, if one is sufficiently foolhardy, continue to drive and cease to pay heed to what one is doing would suggest *prima facie* that there are two distinct processes going on here. Ryle is doubtless right in pointing out that in driving with care one is not doing two things at once in quite the same sense as one is when one is walking along and humming at the same time. In humming and walking at the same time one is performing two distinct sets of muscular movements simultaneously. When heeding and driving occur together, on the other hand, there is only one set of muscular movements, those of manipulating the controls; and in that sense there is only one activity being performed. No one, however, supposes that heed-paying is a separate set of muscular movements occurring alongside

the muscular movements involved in driving. Nor is heeding thought of as an unrelated activity going on at the same time as the driving. It is a peculiar sort of internal activity which controls the movements of the driver's limbs, by regulating his consciousness of the stimuli to which he responds.

6 The dispositional theory of mental concepts

Although Ryle has failed to produce any conclusive objections to the contemplative theory, it is clear that if he can give a plausible account of the logic of 'heed concepts' which dispenses with the assumption that they refer to peculiar private events within the individual, we should undoubtedly be led to prefer such a theory on the grounds of parsimony. We must therefore examine the account which Ryle has offered of the logic of these concepts in order to discover whether or not it constitutes a satisfactory alternative to the traditional view.

The peculiarity of mental concepts as a class is that in order to determine whether or not someone knows, believes, understands, recognizes, remembers, wants, feels, is enjoying, attending to or thinking about something, you either have to cross-examine him or else observe considerable stretches of his behaviour before you can settle the question with any degree of confidence. This logical peculiarity is traditionally explained on the assumption that these mental concepts refer to invisible states and processes within the individual, whose existence and nature can only be determined with certainty by the individual in whom they occur, although it is usually possible also for an external observer to make reliable inferences about them by observing the behaviour to which they give rise.

Ryle's explanation of this logical feature is quite different. He supposes that mental concepts, or at least most of them, refer to what may be called "behavioural dispositions", i.e. capacities, tendencies or temporary dispositions to behave in a certain way. To assert that someone has a capacity or tendency to behave in a certain way on this view is not to say anything about what is going on here and now, it is to assert a hypothetical proposition about how the individual could or would behave if certain circumstances were to arise. Hypothetical propositions of this kind can only be verified by investigating the behaviour of the individual under the conditions supposed. The proposition 'X can swim', for example, can only be verified by observing X's behaviour when in the water. Similarly with the proposition 'X knows the date of the battle of Salamis': unless you happen at that moment to hear X say 'Salamis was fought in 480 B.C.', you would either have to wait for the chance of hearing his reactions when called upon to exhibit his knowledge of ancient history, or else adopt the more practical course of testing his knowledge by asking

the appropriate question. The reason why it is often necessary to cross-examine the individual in order to discover what he knows, is not that knowing is a peculiar internal state or activity of the individual of which he alone is directly apprised; it is that an important part of what we mean when we say that *X* knows the date of the battle of Salamis is that he can give you the correct date when asked to do so.

With a few notable exceptions of which 'cogitating', 'visualizing' and 'having sensations' are the most important, Ryle attempts to apply this type of explanation to all the mental concepts treated in his book. In most cases moreover the attempt has proved remarkably successful. To my way of thinking there can be little doubt that the dispositional account which he gives of such concepts as 'knowing', 'believing', 'understanding', 'recognizing', 'remembering', 'intending' and 'wanting' is substantially correct. It is only with his attempt to apply it to such concepts as 'attending to', 'observing' and 'being conscious of something' that I wish to quarrel.

7 Ryle's application of the dispositional theory to heed concepts

Ryle contends (pp. 137- 9) that to say that someone is paying attention to what he is doing entails that he has at least two important dispositions, (a) the disposition under favourable circumstances to remember and give a first hand report on what it is he has been paying heed to, and (b) the disposition to adapt his performance to the various demands of the task as they arise. Now it is quite true that if we are told that someone is paying close attention to what he is doing, we normally expect him to be able to answer questions about his activity and to have made at least a better showing at the activity than if he had not been applying his mind to the same extent. It is also true, as Ryle points out, that we frequently conclude from the fact that someone is unable to answer questions about something that has been said in his presence, or from his failure in certain skilled performances, that he has not been paying attention to what was said or to what he was doing. But it does not follow from this that to say that someone is paying attention entails that he has the disposition to do these things. A schoolmaster frequently concludes from the fact that a boy has got the wrong answer to a mathematical problem, that he has set about it in the wrong way. Yet this would not lead us to say that to set about a problem in the right way entails a disposition to get the right answer. We only conclude that the boy must have used the wrong method if we know that his capacities are such that he could not have avoided getting the right answer had he used the correct method. Similarly, we only attribute someone's failure in a skilled activity to lack of attention if we know that his capacities are such that no other explanation of his failure is possible.

One would hardly expect someone who had never been near an aeroplane before to be able to meet the demands of the task of piloting one, however closely he attended to what he was doing.

On the view which I am urging, the individual who pays attention is more likely to succeed in so far as he becomes acutely conscious of those features of the situation which are relevant to the successful performance of the task. Close attention to his own activity will be of no avail to the unskilled person because he has not learnt to discriminate between the relevant and irrelevant features. On the other hand an acute consciousness of the details of his own activity in relation to the environment may actually detract from the efficiency of performance in the case of an individual who has learnt to make many of the adjustments involved automatically. Thus we frequently say of someone whose skill is already well developed that his performance suffered because he paid too close attention to what he was doing. It is difficult to see what meaning could possibly be attached to this statement on a dispositional theory of attention.

In claiming that 'attending' entails 'being able to say something about what is going on', Ryle is on stronger ground. It is certainly true that it would be extremely odd to say that someone was paying attention to something, but could tell you absolutely nothing about it. But it is arguable that this is merely because one cannot pay attention to something without at least noticing the thing to which one is paying attention. There is no doubt that to say one has noticed something entails that one has the capacity to mention it and point it out, but to say that one has noticed something and to say that one has paid attention to it, are not, as Ryle appears to think, to say the same thing. 'Noticing' is an achievement concept like 'recognizing', 'perceiving', not an activity concept like 'pondering' or 'attending'. 'Noticing', 'perceiving', or 'recognizing', are the achievements that result from the activities of looking, listening and attending. If one looks, listens or attends one normally notices or recognizes something or other, but one can also attend and fail to notice; one can look and fail to see, listen and fail to hear. When we say that we have failed to notice anything, what we really mean is that we have failed to notice anything remarkable or anything additional to what we have already noticed. You can hardly be said to have paid attention, if there was nothing at all which you could be said to have noticed as a result of your attending. But it does not follow from the fact that *A* notices more about the situation than *B* that *A* was paying closer attention. The man who pays closer attention usually notices more, but the relationship is contingent rather than necessary.

8 Ryle's account of the logic of heed concepts

The expression 'paying attention to something' exhibits the distinctive logical characteristics which are normally associated with words and expressions which refer to activities. The fact that it is perfectly good sense to speak of someone being engaged in paying attention to something, while it is nonsensical, for example, to speak of someone being engaged in knowing or understanding something, clearly shows that 'paying attention' or 'heed' is an activity expression in contrast to dispositional verbs like 'expect', 'know', 'like', and 'believe' or achievement verbs like 'understand', 'remember', 'recognize', 'perceive' and 'infer' where such a combination would be nonsensical.

It might be objected that 'attending' differs from those verbs which unquestionably refer to activities in that it is not sensible to use it in conjunction with adverbs like 'quickly' or 'slowly'. We can say 'he slowly began to pay attention to his surroundings', but not 'he paid slow attention to his book for five minutes and then rapid attention to the black-board'. There are, however, a number of expressions which can properly be described as 'activity verbs' of which the same is true. For example we can say 'he slowly took hold of the hammer' but not 'he held the hammer slowly for five minutes'. The analogy between 'attending' and 'holding' seems generally very close.

In support of his contention that 'attending' is not an ordinary activity verb, Ryle draws attention to the curious fact that it is always possible to replace a 'heed verb' by a 'heed adverb'. We can speak, to use his examples, of 'reading attentively', 'driving carefully' and 'conning studiously' just as readily as we can of 'attending to the page in front of one', 'taking care in one's driving', and 'applying one's mind to the task of translation' (p. 138). Ryle contends that the adverbial form is the more accurate way of expressing what is meant when a 'heed concept' is used. To say that someone is doing something heedfully, he maintains is merely to say that he is doing it in a certain way or in a certain frame of mind, i.e. with a disposition to adapt his performance to the various demands of the task as they arise and to answer questions about it.

On this theory the fact that 'paying attention' behaves like an ordinary activity word is explained on the assumption that the phrase 'paying attention to something' is analyzable into two parts, (a) a categorical statement that a certain activity is taking place, and (b) a hypothetical or dispositional statement about how the individual in question *would* behave if certain contingencies were to arise. Ryle calls it for this reason a "mongrel categorical statement". The categorical part of the statement from which it derives its logical characteristics, is however, extremely uninformative. It asserts merely that some unspecified activity is being performed. In order to discover the nature of this

activity we must find out what it is that the individual in question is paying attention to. As Ryle points out (p. 143) to say that someone is paying attention is an incomplete statement, unless we are told or unless it is obvious from the context of the remark what it is that he is paying attention to. On this view the part of the supposed meaning of the phrase which refers to the performance of an activity is strictly speaking redundant, since it must always be supplemented by a specification of the activity which is being performed.

In his lengthy discussion of "mongrel categorical expressions" (pp. 140-7) Ryle is at pains to try to explain how it is that the fact of attention or inattention can be used to explain the failure or success of the individual in the activity he is performing. He shows convincingly enough that we can explain the bird's flying south by saying that it is migrating, without implying that migration is an additional process superimposed on the activity of flying south. The statement that the bird is migrating explains the behaviour of the bird by bringing the particular behaviour in question under the general rule that birds of certain species change their habitats at certain times of the year. Unfortunately he does not explain how the analogy is to be applied in the case where we explain the failure of an individual to complete a task satisfactorily or to give an adequate report on what was happening, by saying that he was not paying sufficient attention. It is difficult in this case to see what the general rule involved could be, unless it is the rule that if you don't pay attention you won't be able to carry out the activity you are performing satisfactorily or give an adequate first hand report on what went on. On Ryle's analysis of attention this general proposition reduces to the tautology 'unless you are disposed to give a first hand report on what is going on and to carry out what you are doing satisfactorily, you won't be able to give a first hand report on what is going on or carry out the activity you are performing satisfactorily'.

9 The objection to Ryle's account of the logic of heed concepts

Although Ryle fails to produce any conclusive reasons for adopting his theory of attending' in preference to the traditional account, it is difficult to produce any decisive arguments against it as long as we restrict the discussion to the special case where we speak of someone paying attention to what he is doing. His case breaks down, however, once we try to apply it to those cases where we are said to pay heed to an object in our environment or to some feeling we have, without being engaged in any other activity with respect to it. Ryle castigates the traditional theorists for 'misdescribing heed in the contemplative idiom' (p. 137), but he himself overlooks in developing his own theory the important cases where paying heed to something is purely a matter of watching, listening,

observing or contemplating. Ryle explains the fact that 'attending' exhibits the usual characteristics of an activity verb, rather than those of a dispositional verb, on the assumption that verbs like 'attending' and 'heeding' assert the occurrence of the activities which are being performed attentively. There is no special activity called 'attending', there is only the attentive performance of an activity. The logical consequence of this theory is that the individual's own activities are the only sorts of things to which attention can be paid. If Ryle's theory were correct it should be nonsensical to talk of someone paying attention to anything other than an activity which he himself is performing. In fact, of course, we can speak with perfect propriety of the paying attention to any kind of object, phenomenon or sensation which is visible, audible, tangible, or otherwise perceptible. In such cases there is no activity which is being performed attentively or heedfully. To attend in such cases is merely a matter of contemplating or observing the object or phenomenon in question. We cannot say that when we pay heed to something we are watching it, listening to it, observing or contemplating it heedfully, since as Ryle himself points out (pp. 207 and 223), words such as 'watching', 'listening', 'observing' and 'describing' already entail that heed is being paid. These expressions do not refer to activities like driving a car which can be performed with or without heed, they refer to special forms of the activity of heed-paying itself. It makes nonsense to say that someone was observing, watching, contemplating or listening to something without paying any attention to it, whereas it makes perfect sense to speak of someone driving without paying any attention to what he is doing.

The inadequacy of Ryle's account appears most clearly when we examine the account which he gives of expressions like 'being conscious of', 'observing', 'watching' and 'listening'. To be conscious of the sensations in a blistered heel according to Ryle (pp. 157-8) is to pay heed to them; but what is the activity which is being performed attentively or heedfully here? It would seem from his long discussion of 'observation' (ch. vii) that for Ryle to say that one is observing something is to say that one is paying heed to the sensations derived from it, and 'watching' and 'listening' by the same token, refer to the paying of heed to visual and auditory sensations respectively. But we cannot say that 'having sensations' is the activity which is being performed heedfully in these cases, since to have a sensation itself entails paying at least some heed to the sensation. We can speak of failing to notice the sensations which one would have had if one had paid attention to them; but to say that one had a tingling sensation in the left toe without noticing it is nonsense. Ryle accuses the traditional theory of being unable to provide a sensible account

of the difference between a careful and a careless observer, but his own theory, while giving a plausible account of carefulness, fails to explain the activity of observing.

10 The dispositional theory restated

Although Ryle has failed to provide a satisfactory account of consciousness, attention and observation in terms of the dispositional theory of mental concepts, it would be unwise to conclude that such an account cannot be given. Ryle's account fails mainly because he overlooks the fact that our own activity is not the only sort of thing to which we can pay attention. The possibility of providing a plausible dispositional theory which takes account of our consciousness of and attention to objects, phenomena and sensations is not ruled out. Indeed it is not difficult to suggest the form which such a theory might take.

We have seen that although paying attention to what one is doing does not entail being prepared to meet the demands of the task in hand, it cannot be denied that to pay attention to something entails noticing and hence being able to say something about it. It must also, I think, be conceded that it involves being ready to encounter something, although one need not be prepared to encounter the sort of thing that is actually there. This, however, cannot be all that we are saying when we say that someone is attending to something, since we can be ready to behave in a manner appropriate to the presence of some object or event in our immediate environment without actually being conscious of it. Our disposition to act in this way may be a result of something we have been told, some inference we have drawn or some observation made a few moments previously. In such cases we might be said to know, remember or suspect that it was there, but we would not be observing, attending to or conscious of it. In order for us to be conscious of something our disposition to react to its presence must result from its impingement on our sense organs at the time.

With the qualification that the disposition must result from sensory stimulation, it becomes quite plausible to maintain that to be conscious of something is to be ready to react both verbally and otherwise to the presence of some object or event in one's immediate environment. On this theory the contribution of attending to skilled performance would be explained by pointing out that unless the individual is disposed to react in a manner appropriate to the presence of the relevant features of his own activity and the environmental situation in which it takes place, he is not likely to be very successful.

On this view 'consciousness', 'attention' and 'observation' refer to a temporary state of readiness for something. You would therefore expect them to exhibit the logical features

of expressions referring to temporary states of affairs. Expressions like 'being conscious' or 'aware of' do exhibit these logical characteristics. Words like 'attending', 'observing', 'watching', 'looking' and 'listening', on the other hand, exhibit the logical behaviour characteristic of expressions which refer to activities. This fact as we have seen, appears to provide a formidable obstacle to any dispositional theory of the meaning of these words. Nevertheless the difficulty can probably be overcome without appealing to any kind of internal process or activity, by examining the notion of 'activity' itself. It is at least arguable that when we speak of an individual's activities, of the things he does, we refer to those changes in him which can be induced by such things as commands, entreaties, instructions and deliberations. Any changes whether muscular or non-muscular which he can decide or be asked to bring about in himself are things which he does. Paying attention and observing are not muscular movements, nor are they movements of a mysterious transcendental musculature, they are, so the theory might run, changes in the individual's short term dispositions, readiesses or "sets" (to use a term which **at one time had** a wide currency in the psychological literature) which can be induced by appropriate commands, requests or by decisions on the part of the individual himself.

In the light of these considerations we may restate the dispositional theory of attention, observation and consciousness as follows: to observe or pay attention to something is to bring about a change in oneself such that the impingement of the object or phenomenon in question on one's receptor organs prepares one to respond both verbally and otherwise in a manner appropriate to the presence of something; while to be conscious of something is to be so disposed.

11 The case for the traditional view

Stated in this way my quarrel with the dispositional theory is less substantial than my agreement with it. My contention is not so much that it is wrong as that it is incomplete. It is incomplete because it makes no reference to the internal state of the individual which enables him to describe and respond appropriately to the presence of objects in his vicinity. On the view which I wish to defend, when we use what Ryle calls a 'heed concept', we are not merely referring to the disposition to respond in a manner appropriate to the presence of the thing in question and specifying how that disposition is brought into being, we are also referring to an internal state of the individual which is a necessary and sufficient condition of the presence of such a disposition. I shall now try to present arguments in support of this contention.

One of the major weaknesses of Ryle's account of mental concepts is, as he himself recognizes, his retention of the traditional extended use of the term sensation (ch. vii). He is compelled to retain this use in order to provide something, having a sensation, which the observer of an object can be said to do heedfully. One of the advantages of the revised form of the dispositional theory which I have stated is that it dispenses with the necessity for this concession to the traditional misappropriation of mental concepts. But although it dispenses with the necessity of abusing the concept of sensation, it runs into serious difficulties when applied to those cases where we do speak of being conscious of or of attending to our sensations, i.e. in those cases where our state of consciousness results from interoceptive or proprioceptive stimulation or from the various twists and quirks of our sensory apparatus, rather than from the impingement on our sense organs of any specifiable state of affairs in our environment.

Suppose that having applied pressure to my eyeball, I am conscious of a sensation of light. According to the revised dispositional theory this means that I am disposed to react to the presence of something. But what is it that I am disposed to react to? It cannot be the pressure on my eyeball, since to be conscious of light sensations is not the same thing as being conscious of pressure applied to the eyeball. But it cannot be the presence of the sensation either. Sensations, as we have seen, do not exist independently of our consciousness of them. There are not two things, my sensation and my consciousness of it, in the way that there are two things, a penny and my consciousness of the penny. The occurrence of a sensation entails someone's consciousness of that sensation.

To be disposed to react to a sensation therefore would be to be disposed to react to one's consciousness of that sensation. In other words we now have an infinite regress of dispositions, instead of the infinite regress of ghostly operations which appears so frequently in Ryle's criticisms of the traditional theories. We might be tempted to meet this objection by supposing that to say that someone is conscious of a sensation of light is to say that he is temporarily disposed to react as he would normally do if there had been a flash of light. But to be disposed to react as if there were a flash of light, would be to believe or be tempted to believe that a flash had occurred; whereas it makes perfectly good sense to say that he was conscious of a vivid sensation of light, yet it never occurred to him for one moment to suppose that there had been any actual flash of light. In other words an individual's state of consciousness is something over and above any dispositions which it arouses in him.

An objection which applies to any attempt to give a dispositional account of consciousness and attention is the objection that it always makes sense to ask the

individual to describe what it is like to watch, listen, observe or be conscious of something, whereas it does not make sense to ask him what it is like to have a certain capacity or tendency. We can only describe what something is like if it is an object, situation or occurrence. We can describe, characterize or define such things as relationships, capacities and tendencies, but we cannot describe what they are like. We can describe what a car is like, but we cannot describe what its horse-power is like; we can describe what it is like for one billiard ball to strike another and propel it forward, but we cannot describe what the causal relationship is like; we can describe what it is like to swim or what it is like to realize that one can swim, but not what it is like to be able to swim; we may be able to describe what it is like to be told or call to mind the fact that whales are mammals, but we cannot describe what it is like to know or believe that they are. If to be conscious of something were merely to be disposed to react in some way, it should be logically impossible for us to describe what it is like to be conscious of something. In fact there is no logical impossibility here. We are continually describing what it is like to watch, look at, listen to or feel things.

It might be objected with some justification here that what we describe is not our consciousness, but the things we are conscious of. As we have seen, part of what is meant by saying that someone is conscious of something is that he can say something about it. It is certainly true that when we describe some object in our environment of which we are conscious, our description is a description of the object itself, and not, as has sometimes been supposed, a description of our consciousness of that object. It is also true that we cannot describe the state of being conscious in abstraction from the things we are conscious of. But that does not mean that we do not on occasions describe our consciousness of things as distinct from describing the things themselves. When we say, to use a familiar example, that the penny looks elliptical when viewed at an angle, we are not describing the penny, nor are we describing the image which it projects on our retina; we are describing what it is like to look at a penny from that particular angle; we are saying that it is somehow like looking at an ellipse viewed full face. When we say this, moreover, we do not imply that we are disposed to act in a manner appropriate to its being an ellipse. The elliptical shape of the penny is not an optical or a psychological illusion (cf. Ryle's discussion of this problem pp. 216-18).

When we describe a state of consciousness, we usually do so by comparing being conscious of one thing with being conscious of another. Nevertheless there are one or two expressions like 'pleasant', 'unpleasant', 'vivid', 'dim', 'acute' and 'vague' which we apply to the states of consciousness themselves. These are somewhat unusual adjectives to apply

to a state of readiness. Furthermore the difference between vividness and dimness, acuteness and vagueness is difficult to explain on a dispositional theory of consciousness. The only possible interpretation on such a theory is in terms of the appropriateness of the behaviour, for which one is prepared, to the presence of whatever it is one is conscious of. Acute consciousness, however, does not guarantee the appropriateness of the resulting behaviour. The statement 'his consciousness of his own ineptitude was so acute that he was unable to do anything about it', makes perfectly good sense. It also describes a situation with which some of us are only too painfully familiar. If we recognize that consciousness is some sort of internal state of the individual these discrepancies between the intensity of the individual's consciousness and the adequacy of the behaviour for which it prepares him, no longer constitute a problem.

Finally, there are considerations of a more general nature. If there were no decisive arguments either way, we should probably prefer the dispositional to the internal process theory of consciousness and attention on the grounds of parsimony. As against this must be set the fact that in every other case where verbs having 'activity' characteristics are involved, it has been found impossible to apply a purely dispositional analysis, and in at least one group of cases the reference to internal processes within the individual cannot seriously be denied. The cases I have in mind here are thinking (in the sense of thinking about or thinking to oneself), pondering, calculating, imagining, dreaming, visualizing and doing mental arithmetic. Ryle (p. 27) has made a strong case for the view, that when we talk about someone thinking (in the relevant sense), pondering, calculating, or imagining we are not asserting the occurrence of any internal process or activity. He contends that the activity referred to, although sometimes covert, as when it consists of visualizing or performing mental arithmetic, need not be so. It may equally well consist in some entirely overt performance such as drawing, talking out loud to oneself or playing a game of make-believe. To assert that someone is thinking or imagining does not discriminate between these two possibilities. This argument disposes, or at least appears to dispose, of the view that words like 'thinking' and 'imagining' necessarily assert the occurrence of covert activities, but there is no suggestion that these are dispositional concepts. Nor is there any attempt to deny that thinking sometimes consists in a purely covert process or that expressions like 'dreaming', 'visualizing' and 'mental arithmetic' refer to such processes. If this is conceded with respect to 'dreaming', 'visualizing' and 'mental arithmetic', it is difficult in view of the weight of traditional and common-sense opinion and the lack of any positive evidence against it, to see why a similar concession should not be made with respect to 'attending', 'observing', 'watching', 'looking' and 'listening'.

Concepts like 'observing', 'watching', 'listening' and 'being conscious of' are, in fact, closely related to concepts like 'visualizing' and 'dreaming' in a way, which is extremely difficult to explain, if the former are regarded as dispositional concepts. For if we want to explain what sort of thing this business of visualizing or dreaming is, the answer which immediately suggests itself is to say that visualizing something is like watching it except that there is nothing there really and you don't have to have your eyes open. Now if to watch something is merely to bring about a change in oneself such that the impingement of the thing in question on one's eyes prepares one to respond both verbally and otherwise in a manner appropriate to there being something there, this explanation becomes completely unintelligible. Apart from the fact that both visualizing and watching are things which the individual can be said to do, it is exceedingly difficult on this theory to find anything which the two cases have in common. We cannot say that to visualize is to be disposed to act and speak as if there were something impinging on one's eyes when in fact there is not. Any one who is so disposed would be suffering from a visual hallucination, and although having a visual hallucination may be said to involve visualizing, we can visualize things perfectly well without being hallucinated. The similarity between visualizing something and watching it lies in the internal state of the individual which is brought into being, not in the behavioural dispositions which that state induces.

12 Conclusions

If the above arguments prove what I think they prove, are we back where we started at the beginning of Ryle's inquiry? Do these arguments merely put the Ghost back into the Machine? I do not think so. So far as I am aware, the criticisms I have made of the dispositional theory apply only to the dispositional analysis of consciousness and heed concepts generally. The dispositional analysis of intelligence, knowledge, belief, motives and memory remains unaffected, except in so far as these concepts involve dispositions to pay attention to or become conscious of certain features of one's environment. Indeed, since Ryle himself appears to accept the view that words like 'watching', 'listening' and 'observing' entail a reference to a covert process of having sensations, it is only in the case of the heedful performance of muscular activities that the view which has been urged in this paper differs from the account which Ryle has given as far as recognizing a reference to covert states and processes is concerned. On Ryle's view, however, these processes are relatively unimportant; we learn to talk silently to ourselves in order not to disturb others; we could plan our course of action on paper, but it is often more convenient to do it in our heads. If, on the other hand, our very ability to describe and adapt our behaviour to

the objects and phenomena which impinge on our sense organs, is dependent on a special **internal state**¹ within ourselves, which can itself be described by the person in whom it occurs, the reference which is made to such a process in our use of expressions like 'attending', 'observing' and 'being conscious' can hardly be brushed aside as a matter of no great significance. If such a view is accepted, we can hardly avoid raising the question which Ryle has dodged persistently throughout his book, namely the question: 'What are these curious occurrences within ourselves on which we can give a running commentary as they occur?' Lack of space unfortunately precludes any discussion of this fascinating problem here. It is my belief, however, that the logical objections to the statement 'consciousness is a process in the brain' are no greater than the logical objections which might be raised to the statement 'lightning is a motion of electric charges'.

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¹ This is a temporally extended state of an ongoing process, not a dispositional state.